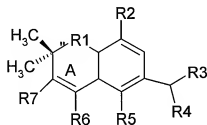


CURRENT STATUS OF CLAIMS

- (ORIGINAL) A pharmaceutical composition comprising a compound of



formula (I)

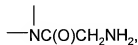
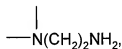
wherein

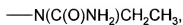
A is a π bond or absent;

R1 is O, S, or F;

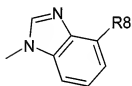
R2 is H, OH, branched or unbranched C_{1-12} alkyl, alkoxy, aryl, heterocycle, imidazole, alkyl substituted aryl, halo substituted aryl, halo, amine, or acyl;

R3 is H, OH, branched or unbranched C_{1-12} alkyl, alkoxy, aryl, heterocycle, imidazole, substituted imidazole, alkyl substituted aryl, halo substituted aryl, halo, amine, acyl, or Z, wherein Z is NH_2 ,





or



wherein R8 is H, OH, alkyl, alkoxy, or halo;

R4, R6 and R7 are independently H, OH, branched or unbranched C₁₋₁₂ alkyl, alkenyl, alkoxy, aryl, heterocycle, imidazole, substituted imidazole, alkyl substituted aryl, halo substituted aryl, halo, amine, or acyl;

R5 is H, OH, halo, alkyl, or alkoxy; or

a pharmaceutically acceptable salt or prodrug thereof in an amount sufficient to inhibit intracellular HIF-1 activity.

2. (PREVIOUSLY PRESENTED) The pharmaceutical composition of claim 1, comprising one more compounds selected from the group consisting of

1-[(2,2-dimethyl-2*H*-chromen-6-yl)(phenyl)methyl]-1*H*-imidazole;

1-[(2,2-dimethyl-4a,8a-dihydro-2*H*-chromen-6-yl)(4-methylphenyl)methyl]-1*H*-imidazole;

1-[(2,2-dimethyl-2*H*-chromen-6-yl)(3-methoxyphenyl)methyl]-1*H*-imidazole;

1-[(5-methoxy-2,2-dimethyl-2*H*-chromen-6-yl)(4-methylphenyl)methyl]-1*H*-imidazole;

1-[(2,2-dimethyl-2*H*-chromen-6-yl)(4-fluoro-3-methylphenyl)methyl]-1*H*-imidazole;

1-[(4-chlorophenyl)(2,2-dimethyl-2*H*-chromen-6-yl)methyl]-1*H*-imidazole;

1-[(5-methoxy-2,2-dimethyl-2*H*-chromen-6-yl)(phenyl)methyl]-1*H*-imidazole;

1-[1-(5-methoxy-2,2-dimethyl-2*H*-chromen-6-yl)-3-methylbutyl]-1*H*-imidazole;

1-[(3,3-dimethyl-7,10-dihydro-3*H*-benzo[*f*]chromen-8-yl)(4-fluoro-3-methylphenyl)methyl]-1*H*-imidazole;

1-[(3,3-dimethyl-7,10-dihydro-3*H*-benzo[*f*]chromen-8-yl)(3-methoxyphenyl)methyl]-1*H*-imidazole;

1-[(3,3-dimethyl-7,10-dihydro-3*H*-benzo[*f*]chromen-8-yl)(4-methylphenyl)methyl]-1*H*-imidazole;

1-[(8-methoxy-2,2-dimethyl-2*H*-chromen-7-yl)(phenyl)methyl]-1*H*-imidazo[4,5-*b*]pyridine;

1-[1-(5-methoxy-2,2-dimethyl-2*H*-chromen-6-yl)ethyl]-1*H*-imidazo[4,5-*b*]pyridine;

1-[1-(5-methoxy-2,2-dimethyl-2*H*-chromen-6-yl)-3-methylbutyl]-1*H*-imidazo[4,5-*b*]pyridine;

1-[1-(3,3-dimethyl-7,10-dihydro-3*H*-benzo[*f*]chromen-8-yl)-3-methylbutyl]-1*H*-imidazo[4,5-*b*]pyridine;

4-chloro-1-[cyclohexyl(5-methoxy-2,2-dimethyl-2*H*-chromen-6-yl)methyl]-1*H*-benzimidazole;

1-[cyclohexyl(5-methoxy-2,2-dimethyl-2*H*-chromen-6-yl)methyl]-1*H*-benzimidazole;

1-[1-(2,2-dimethyl-2*H*-chromen-6-yl)prop-2-en-1-yl]-2-methyl-1*H*-benzimidazole;

1-[cyclohexyl(2,2,6-trimethyl-2*H*-chromen-8-yl)methyl]-1*H*-benzimidazole;

(2,2-dimethyl-2*H*-chromen-6-yl)(3-hydroxyphenyl)methyl biphenyl-4-carboxylate;

N-isopropyl-3,4-dimethoxy-*N*-[(8-methoxy-2,2-dimethyl-2*H*-chromen-7-yl)methyl]benzenesulfonamide;

1-[(4-*tert*-butylphenyl)(2,2-dimethyl-4a,8a-dihydro-2*H*-chromen-6-yl)methyl]-1*H*-imidazole;

N-[(2,2-dimethyl-4a,8a-dihydro-2*H*-chromen-6-yl)(phenyl)methyl]-*N*-ethylurea;

N-[(2,2-dimethyl-4a,8a-dihydro-2*H*-chromen-6-yl)(phenyl)methyl]-*N*-methylethane-1,2-diamine;

N-(aminomethyl)-*N*-[(2,2-dimethyl-4a,8a-dihydro-2*H*-chromen-6-yl)(phenyl)methyl]acetamide; and

*N*¹-[(2,2-dimethyl-4a,8a-dihydro-2*H*-chromen-6-yl)(phenyl)methyl]-*N*¹-methylglycinamide

in an amount effective to modulate intracellular HIF-1 activity.

3. (PREVIOUSLY PRESENTED) The pharmaceutical composition of claim 1, comprising a hydrolysis, oxidation, or reduction reaction product of any of the compounds of claim 1.

4. (PREVIOUSLY PRESENTED) The pharmaceutical composition of claim 3, wherein the hydrolysis, oxidation, or reduction reaction opens a nitrogen containing ring of any of the compounds of claim 1.

5. (PREVIOUSLY PRESENTED) The pharmaceutical composition of claim 1, further comprising a second therapeutic agent.

6. (ORIGINAL) The pharmaceutical composition of claim 5, wherein the second therapeutic agent is an antibiotic, anti-inflammatory, anti-oxidant, analgesic, radioisotope, nascopine, paclitaxel, nocodazole, vinca alkaloids, adriamycin, alkeran, Ara-C, BiCNU, busulfan, CCNU, carboplatinum, cisplatin, cytoxan, daunorubicin, DTIC, 5-FU, fludarabine, hydra, idarubicin, ifosfamide, methotrexate, mithramycin, mitomycin, mitoxantrone, nitrogen, mustard, velban, vincristine, VP-16, gemcitabine, herceptin, irinotecan, camptosar, CPT-11, leustatin, navelbine, rituxan, STI-571, taxotere, topotecan, hycantin, xeloda capecitabine, zevelin, and combinations thereof.

7. (PREVIOUSLY PRESENTED) A method for the treatment or prevention of a hypoxia-related pathology comprising:

administering to a host in need of such treatment an HIF-1 inhibiting amount of any of the compositions of claim 1.

8. (PREVIOUSLY PRESENTED) A method of modulating HIF-1 activity in a cell comprising: contacting the cell with an HIF-1 inhibiting amount of any of the compositions of claim 1.

9. (PREVIOUSLY PRESENTED) A method of treating or preventing cancer or a tumor in a host comprising administering to the host a HIF-1 inhibiting amount of any of the compositions of claim 1.

10. (ORIGINAL) The method of claim 9, wherein the cancer or tumor is selected from the group consisting of bladder cancer, breast cancer, colorectal cancer, endometrial cancer, head & neck cancer, leukemia, lung cancer, lymphoma, melanoma, non-small-cell lung cancer, ovarian cancer, prostate cancer, testicular cancer, uterine cancer, cervical cancer, thyroid cancer, gastric cancer, brain stem glioma, cerebellar astrocytoma, cerebral astrocytoma, ependymoma, Ewing's sarcoma family of tumors, germ cell tumor, extracranial cancer, Hodgkin's disease, leukemia, acute lymphoblastic leukemia, acute myeloid leukemia, liver cancer, medulloblastoma, neuroblastoma, brain tumors generally, non-Hodgkin's lymphoma, osteosarcoma, malignant fibrous histiocytoma of bone, retinoblastoma, rhabdomyosarcoma, soft tissue sarcomas generally, supratentorial primitive neuroectodermal and pineal tumors, visual pathway and hypothalamic glioma, Wilms' tumor, acute lymphocytic leukemia, adult acute myeloid leukemia, adult non-Hodgkin's lymphoma, chronic lymphocytic leukemia, chronic myeloid leukemia, esophageal cancer, hairy cell leukemia, kidney cancer, multiple myeloma, oral cancer, pancreatic cancer, primary central nervous system lymphoma, skin cancer, and small-cell lung cancer.

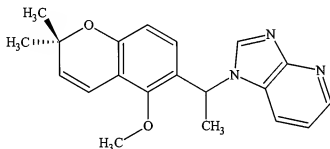
11. (PREVIOUSLY PRESENTED) A method of modulating gene transcription in a cell comprising contacting the cell with an HIF-1 inhibiting amount of one or more of the compositions of any of claim 1.

12. (ORIGINAL) The method of claim 11, wherein the cell is a cancer cell.

13. (ORIGINAL) The method of claim 11, wherein the gene is VEGF, erythropoietin, glucose transporter-1, glycolytic enzymes, or tyrosine hydroxylase.

14. - 54. (CANCELED)

55. (ORIGINAL) A compound of the formula:



or a pharmaceutically acceptable salt, derivative, or prodrug thereof.

56. - 67. (CANCELED)

68. (PREVIOUSLY PRESENTED) The pharmaceutical composition of claim 55, further comprising a second therapeutic agent.

69. (ORIGINAL) The pharmaceutical composition of claim 68, wherein the second therapeutic agent is an antibiotic, anti-inflammatory, anti-oxidant, analgesic, radioisotope, nascopine, paclitaxel, nocodazole, vinca alkaloids, adriamycin, alkeran, Ara-C, BiCNU, busulfan, CCNU, carboplatinum, cisplatinum, cytoxan, daunorubicin, DTIC, 5-FU, fludarabine, hydraea, idarubicin, ifosfamide, methotrexate, mithramycin, mitomycin, mitoxantrone, nitrogen, mustard, velban, vincristine, VP-16, gemcitabine, herceptin, irinotecan, camptosar, CPT-11, leustatin, navelbine, rituxan, STI-571, taxotere, topotecan, hycamtin, xeloda capecitabine, zevelin, and combinations thereof.

70. (PREVIOUSLY PRESENTED) A method for the treatment or prevention of a hypoxia-related pathology comprising:

administering to a host in need of such treatment an HIF-1 inhibiting amount of any of the composition of claim 55.

71. (PREVIOUSLY PRESENTED) A method of modulating HIF-1 activity in a cell comprising: contacting the cell with an HIF-1 inhibiting amount of any of the composition of claim 55.

72. (PREVIOUSLY PRESENTED) A method of treating or preventing cancer or a tumor in a host comprising administering to the host a HIF-1 inhibiting amount of any of the composition of claim 55.

73. (ORIGINAL) The method of claim 72, wherein the cancer or tumor is selected from the group consisting of bladder cancer, breast cancer, colorectal cancer, endometrial cancer, head & neck cancer, leukemia, lung cancer, lymphoma, melanoma, non-small-cell lung cancer, ovarian cancer, prostate cancer, testicular cancer, uterine cancer, cervical cancer, thyroid cancer, gastric cancer, brain stem glioma, cerebellar astrocytoma, cerebral astrocytoma, ependymoma, Ewing's sarcoma family of tumors, germ cell tumor, extracranial cancer, Hodgkin's disease, leukemia, acute lymphoblastic leukemia, acute myeloid leukemia, liver cancer, medulloblastoma, neuroblastoma, brain tumors generally, non-Hodgkin's lymphoma, osteosarcoma, malignant fibrous histiocytoma of bone, retinoblastoma, rhabdomyosarcoma, soft tissue sarcomas generally, supratentorial primitive neuroectodermal and pineal tumors, visual pathway and hypothalamic glioma, Wilms' tumor, acute lymphocytic leukemia, adult acute myeloid leukemia, adult non-Hodgkin's lymphoma, chronic lymphocytic leukemia, chronic myeloid leukemia, esophageal cancer, hairy cell leukemia, kidney cancer, multiple myeloma, oral cancer, pancreatic cancer, primary central nervous system lymphoma, skin cancer, and small-cell lung cancer.

74. (PREVIOUSLY PRESENTED) A method of modulating gene transcription in a cell comprising contacting the cell with an HIF-1 inhibiting amount of the composition of claim 55.

75. (ORIGINAL) The method of claim 74, wherein the cell is a cancer cell.

76. (ORIGINAL) The method of claim 74, wherein the gene is VEGF, erythropoietin, glucose transporter-1, glycolytic enzymes, or tyrosine hydroxylase.